Ops Folk,
Below are the notes Ted Willard took during our Ops-Dev Q&A session Apr 8th, on DDIST.
hope this helps,
-john

RE:
GUI Questions

1. Why are the GUI's such resource hogs? As of now, operators are required to bounce their distribution GUI almost three times a day and we're told to bring up the Storage Management GUI only when needed. Can this be fixed and if so when?

Written response provided by Don Brown: STMGT GUI has fixed all known memory leaks and should not have to be bounced. DDIST server status is unknown, but I believe that the memory leaks in it have been addressed as well.

Oral Response provided by Don Brown: Don Brown believes the fixes should be in for the memory leaks that have caused the GUI to grow in size over time.

2. Print report - Ingest GUI in the history log is incomplete. Is there a way to change the options for the printer and print the whole log if needed from the screen?

Oral Response provided by Don Brown :Don Brown has no input on Ingest

3. Ingest GUI, Media Ingest tab, D3 tape. This freezes all xterms and the GUI. This is operationally unusable. Can it be changed? Why is this done? We have not seen the GUI freeze xterms. The interface between the GUI and the STMGT servers is synchronous and the GUI itself will be frozen during D3 ingests.
Oral Response provided by Don Brown Don knows that the GUI connects to the D3 server syncronously. It should only freeze the Ingest GUI, and not all xterms. There is no current plan to make the interfaces asyncronous.

4. User Profile button on add/edit window of the subscription GUI does not work. When you click this button it crashes the GUI and you have to restart from the beginning. It supposed to retrieve user profile from the MSS database.

Oral Response provided by Don Brown: Don did not have knowledge regarding Subscription Server, and did not know who would be able to answer the question. [Note that Subscription Server is part of the Communications Subsystem.] Don promised to look into the issue, but stated that he was going to LaRC for End to End testing the week of April 12, so did not think he would have a response prior to the week of April 19.

5. Subscription GUI does not allow to view Qualifiers once the subscription is generated. You have to completely exit the application and then edit the subscription in order to find what were the qualifiers for that subscription.
Oral Response provided by Don Brown: See response to GUI question 4.

6. Subscription order tracking - MSS order tracking GUI should include the subscriptions under user name entered through the Subscription GUI. This appears to be a problem, currently not displaying these requests, could be a problem of connecting to MSS.

Oral Response provided by Don Brown: See response to GUI question 4.

7. The 'Resume Activity' button on the Stmgt GUI does not appear to work. How should it function?

Written Response provided by Don Brown: [This response was retracted.]

Resume button is associated with the backup/restore screen and will only work with backup activities. Resume will finish the backup of a file if it failed the copy to the backup archive group. For restore, the button does not work. These comments apply only to 4PY Bath drops and later.

Oral Response provided by Don Brown Don retracted the written answer because of a revised understanding of the question. ECS discovered there was a bug in the code such that the tape stacker server could fail to realize that it could continue. For example, if it ran out of blank tapes, and was reloaded, "Resume Activity" had to be selected to get the stacker to continue to write to tapes.

General Distribution

1. From the SSI&T side of the house and the Distribution GUI: Recently, during our testing of ASTER routine processing, it came to my attention that ASTER input data coming from the archive goes through the Distribution subsystem while being staged for higher level processing. This data shows up on the Distribution GUI. We really noticed it because of the current practice of "throttling" (running in suspend all mode) distribution which effected ASTER processing also.

a. Will this always be the case?
Written Response provided by Jan Dreisbach: No. Landover is working on a cure for the problem that requires us to "throttle".
Oral Response provided by Don Brown: Hopefully, will not need "suspend all". Trying to find better ways to handle resource contention.

b. What will an operator typically do with that GUI?
Written Response provided by Jan Dreisbach: If the system works correctly, only recover from failures.
Written Response provided by Don Brown: The DDIST GUI allows tracking of the order as it goes through the distribution process. Dealing with failures is one aspect of the GUI. Successful distributions may require additional operator actions (e.g. bundling tapes together). The GUI allows for the operator to change the state of the request after performing some additional task. There is additional information on the GUI to aid the collection of all the media associated with a given request.

Oral Response provided by Don Brown: DDIST GUI is for tracking of orders through distribution. DDIST GUI and STMGT GUI provide information to track a group of tapes from a single distribution.

Additional discussion:
Linda McNeilly said that in multi-tape distributions each tape is given the same ID in the GUI, but the log correctly shows distinct tape IDs. Don says the GUI should be showing the correct ID, and if not, Don will look into it.

c. Is there a way not to include the data stages to the science processor on this GUI? At least a filter perhaps?

Written Response provided by Don Brown: All data to processing goes via Ftp Push. DDIST GUI provides the hooks to filter based on the type of distribution, but the filtering does not work.

Oral Response provided by Don Brown: They will NCR it.

c. Is there a way to monitor ASTER and MODIS distribution (ftp and 8mm - and CD someday:)?
Written Response provided by Jan Dreisbach: Yes, through the GUI.
Oral Response provided by Don Brown: It is to filter on media type. Nominally the ability is there, but does not currently work.
2. How do the priority functions in the SDSRV and DDIST work? What is the queuing mechanism?
Written Response provided by Don Brown:DDIST has a dynamically configurable number of threads for each of 5 priorities (express, very high, high, medium, and low). Requests in excess of the number of threads for a priority will be queued on the queue for that priority.
Oral Response provided by Don Brown:DDIST has 5 queues that are dynamically configurable. If you reduce the number allowed in a queue below what is currently being used, all of the currently executing threads run to completion. Don believes these parameters are available through the GUI.

3. What is the status of data compression as a distribution option?
Written Response provided by Don Brown: Scheduled for 6A.

4. Explain the distribution scenario for standing orders that have been initialized by subscription service. In looking at DID313 ECS Internal ICD, pg. 3-77, there is a comment that standing orders are not currently tracked orders and the user that DDIST sends the notification to is determined from the 'order'. Since there is no 'order' and thus no email address, the default appears to be sending the email to the distribution technician to be forwarded. Ok, maybe this would work for a few orders, but how does the technician know whom the order is for? How does the statement in DID313 correlate with the email address entered when the subscription is initialized?

Written Response provided by Don Brown:There is a requestor name that is associated with the subscription. The MSS User Profile is consulted for the email address.

Oral Response provided by Don Brown: DDIST goes through 3 steps: Contact MSS order object. If there is no MSS order object, there should be a request user profile. If there is no user profile, the order information is sent to the operator.

Discussion
This is not currently working with the subscriptions. Supposedly no evidence that MSS is interacting with the user profile. GSFC and LaRC concur.

5. I would like to discuss the TT#629 which transforms to NCR#ECSed20747. If a data distribution request happens to have an end date not defined, the default date entered is the year 1901 and I would like to make sure that it is not a Y2K problem. The response to the NCR came from Mark Pellitier, but I would just like further clarification. I have mentioned it several times that the default end date should be in the future and not in the past and could this cause problems once the year 2000 is here as you will be searching for orders that are a century old then.

Written Response provided by Don Brown:There was a fix for a Y2K bug that was put into the server code as a result of internal Y2K testing. The year is being held as a 4 character value rather than 2. If the problem repeats, then it should be NCR'ed and will be worked off on the basis of priorities.

Oral Response provided by Don Brown:In Y2k testing found problems about how the DDIST GUI handled years. Fixes are ongoing. When complete, they will revisit the problem.

FTP Distribution

1) How are ftp push errors going to be handled? Will a diagnostic message be generated as to why a FTP push fails?
Written Response provided by Don Brown: STMGT code has been changed to trap ftp errors and return them with more specifics as to what error has occurred. This is being done in part to allow clients to determine whether the ftp push should be retried or not.
Oral Response provided by Don Brown:ECS is trying to trap the FTP errors with a greater granularity. An error code is passed back to indicate whether the error is retryable. In the near future, DDIST GUI should give a better indication of what the actual error is.

Discussion

Is there anyway to find out if the fourth granule of a multiple granule delivery fails? No. Don says to trouble ticket it. The DDIST history log ages off the system. In 6A, the DDIST history log will be kept. Don is not sure how this will be done, especially concerned about letting a table grow forever. Another problem was identified, and logs will be provided to Don to help identify the problem. Don says submit a trouble ticket.

2) Can an ftp push be redirected after it fails to push to a specific machine (i.e. ftp push to a machine other than the one originally specified in the subscription.)
Written Response provided by Don Brown:No. This is not planned either.

Discussion

What happens if a subscription fails? How does the user get the data? Job should suspend with errors. Operator will have to contact the user using information from MSS. If the job is not fixed in a fast enough time, it will time out, and go to fail, and then the operator can't do anything with it. If you let it not to time out for 12 hours, what would the reprecussions be? Can the DBID be inserted into the log, so that the DAAC personnel could recreate the order. Don is going to discuss issue with Gordon Brandyburg. Don will be at LaRC next week, so may not get back for 2weeks on issue.

3) Is the number of ftp retries configurable. Can we set a time limit before the ftp push is considered failed.
Written Response provided by Don Brown:The ARCHRESCONFIG file is the configuration file that affects the behavior of STMGT's ftp servers (IngestFtp and FtpDis). The number of retries and the sleep time between each retry is located in that file.

4. Network Data Distribution (FTP Push): For a large the request, the request will be processed as subrequests which will be delivered to the requester individually (i.e., the request will be broken down into smaller, more manageable pieces. The Operator can view the details of such a request via selection of a view function, which exists in the Release A CDR design and will be augmented to support operator sectioning of these large requests. Is this still coming and when? Is it only for CDR?

Written Response provided by Don Brown :The DDIST design presented in Release B CDR had the capability of sectioning requests. There was a lot of discussion at that presentation and disagreement with the design. The focus of the disagreement was that DDIST was too low in the chain to do the breakup of the request into smaller parts. I don't know what came of the discussion past that point, except that DDIST has no design to partition request. It does have a maximum request threshold and a threshold for the maximum amount of data that will be transferred for a given media type (considering ftp push and pull to be media types). Current behavior is to suspend any request that trips one of the thresholds. The operator would then either chose a time to let the activity go or cancel the request with notification going back to the user that the request was too large. There is no work planned in DDIST for breaking up requests.

Currently, for FTP push, if a job is greater than a threshold, then job will be suspended with errors. Operators can restart the request. If it is larger than some other threshold, it will be broken into multiple pushes. No knowledge of any ability to break up request prior to getting to DDIST.

Tape Distribution

1) 8 mm Tape orders- Having problems with the 8 mm media orders, orders showed status as transferring data on the DDIST GUI for long time. Data Distribution tech. person reported that the tape was not spinning or nothing was written to the tape. Debug log showing DsStDbInterface error as DsStSlSelectOpenSlotDrive: available drive for medium Type 8 mm does not exist | Thread 21.

Written Response provided by Don Brown : This could be the result of the following: 1. There are no available tapes 2. The drives all busy 3. If the version of the code is old enough, then there could be a problem with the media type being passed in as 8mm rather than 8MM. It's been long enough ago, that I can't remember if the request was failed or queued. For cases 1 and 2, the request would be queued waiting for resources to become available. In case 1, reassigning a tape group to the stacker would key the request to become active.

Oral Response provided by Don Brown There is a bug in the STMGT gui that the gui reports the wrong permissions. The 8mm server when it runs out of resources, it stops. After the tapes have been added to the stacker, the "resume activity" button needs to be pushed. GSFC is having signifcant problems on 8 mm. Cannot distribute anything that spans multiple tapes. Used to be able to do this. Long list of problems to be written up.

2. The list of files on L7 packing list was all mixed up the other night. Used to be in same order as QA printout. Should this be checked/fixed or is unimportant?

Written Response provided by Don Brown :Don't know what the QA printout is. If the QA printout is not the result of ECS custom code, I doubt there will be a way to coordinate the Packing slip and the printout.

3. The system does not provide for shipping labels for Aster products. DORRAN prints the mailing labels for Landsat7 but since Aster is free, it does not go through DORRAN. Hence, no shipping labels. This is not acceptable operationally. See trouble ticket #861
Written Response provided by Don Brown :Shipping labels were removed from schedule DDIST work. There is a shipping address that comes in

Oral Response provided by Don Brown Looking in to what they can do. Perhaps in 5A or 5B would be a patch such that operators can run a script such that given a order number, an address can be pulled from a database. No idea what the capability was pulled out of DDIST.

Other Q&A
Q: DDIST GUI provides a measure of how much data was pushed, which is always greater than the amount of data actually pushed. Why is that?
A:Perhaps it is do to a file DDIST prepares to identify the data is to be sent.

Q:How to link documents with data?
A:Short answer: I don't know. Does not think there will be an easy way of doing it.

Q:Can you order the production history file?

A:Don believes so.